

## REMARKS

Amendments to the claims have been made to respond to the issues and concerns raised in the Office Action, to clarify aspects in the specification and claims, and to refine claim language. The amendments are believed to be consistent with the disclosure originally filed. The amendments also have been particularly presented to avoid, where applicable, any admission or estoppel, generally, negatively affecting the scope of protection provided by the disclosure and claims of the present application, and also in a manner that avoids prosecution history estoppel, limitation of the scope of equivalences, or the like. Any amendment should not be construed as an admission regarding the propriety of any objection or rejection raised in any Office Action, and the Applicant reserves the right to pursue the full scope of the unamended claims in any subsequent patent application as may be appropriate.

Claims 186, 189-194, 196-197, 199-203, and 219-220 have been amended. Claims 1-185, 195, 198, 204, 209, and 217-218 have been cancelled. Claims 221-227 are newly added. Claims 186-194, 196-197, 199-203, 205-208, 210-216, and 219-227 remain in the application. Each amendment is believed to have been made in accordance with Rule 121. However, should any unintended informality exist, it is requested that the undersigned be contacted by telephone so that it may be resolved as expediently as possible. It is believed the amendments fully respond to the issues raised in the Office Action. Further detail with respect to specific points raised in the Office Action is offered below.

The Office has objected to claims reciting “at least 1200 sorts second”. The Applicant has amended these claims to recite “at least 1200 sorts per second” as suggested by the Office.

The Office has raised various issues under 35 U.S.C. §112 second paragraph. The Applicant believes these issues are resolved by the amendments to the claims. The amendments have been particularly presented to avoid, where applicable, any admission

or estoppel, generally, negatively affecting the scope of protection provided by the disclosure and claims of the present application, and also in a manner that avoids prosecution history estoppel, limitation of the scope of equivalences, or the like. Any amendment should not be construed as an admission regarding the propriety of any objection or rejection raised in any Office Action, and the Applicant reserves the right to pursue the full scope of the unamended claims in any subsequent patent application as may be appropriate.

The Office maintains an obviousness concern with respect to various combinations of references that include the Rens patent, wherein it is asserted that the Rens patent teaches Applicant's claimed sort rate of at least 1200 sorts per second. At the outset, the Applicant notes that it appears the Office does not dispute the fact that the Rens patent does not provide any explicitly stated sort rates that meet or exceed the Applicant's stated sort rates. Moreover, the Applicant already has noted in prior responses that the actual sort rates achieved by the Rens patent cannot be inferred simply on the basis of the sample rates disclosed by the Rens patent. To more explicitly make this point, the Applicant notes that the elliptical nozzle of the Rens patent appears to have been further reviewed in the Rens 1999 publication attached to this response as Exhibit "A". At page 53, Rens 1999 clearly states that when the elliptical nozzle was employed in one experiment at a sample rate of 2000 sperm per second, a 54% orientation was achieved resulting in a sort rate of 200 sperm sorted in each direction. At pages 53-55, Rens 1999 clearly states that when the elliptical nozzle was employed in another experiment at a sample rate of 2000 sperm per second, greater than 50% orientation was achieved resulting in actual rates of sperm deflected and collected that were 200 per second and 180 per second. These actual sort rates achieved are well below the sort rates claimed by the Applicant, even notwithstanding the sample rates and orientation rates stated by Rens 1999. In contrast to the actual sort rates disclosed in Rens 1999, the Office's assertion that the Rens patent teaches the Applicant's claimed sort rates relies on making inferences from other attributes of the Rens patent methodology, and therefore is purely speculative. "The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness", MPEP § 2142, but here the Office has produced

only speculation, and no facts, regarding the actual sort rates achieved by the Rens patent. Accordingly, the Rens patent does not support the contention for which it is cited and the Office has not made a *prima facie* case of obviousness with respect to the Applicant's claims.

The Office raises various double patenting concerns. Please find attached to this response as Exhibit "B" a terminal disclaimer, which is believed to resolve the double patenting concerns.

The Applicant has added new claims 221-227 to the application. These claims are supported by Example 1 set forth in the specification.

## **CONCLUSION**

The Applicant, having addressed each of the concerns raised in the Office Action, respectfully requests reconsideration and withdrawal of the rejections and objections to the application. Allowance of claims 186-194, 196-197, 199-203, 205-208, 210-216, and 219-227 is requested at the Office's earliest convenience.

Dated this 28<sup>th</sup> day of March, 2008.

Respectfully submitted,  
SANTANGELO LAW OFFICES, P.C.

By: /Misha Gregory Macaw/  
Misha Gregory Macaw  
Attorney for Applicant  
USPTO Reg. No. 55,417  
125 South Howes, Third Floor  
Fort Collins, Colorado 80521  
(970) 224-3100